

Appl. No.: 09/478,567
Amdt. dated 01/21/2005
Reply to Office action of October 21, 2004

Amendments to the Specification:

The Office Action (dated October 21, 2004, page 2) has indicated that the reference in the specification to an earlier application does not specify the relationship of the present application to the earlier application. Accordingly, Applicants respectfully request that the following amendment be made to the specification.

Please revise the first full paragraph beginning on page 1, line 3, as follows:

This application is a divisional of ~~claims the benefit of~~ U.S. Application Serial No. 08/988,015, filed December 10, 1997, which is herein incorporated by reference.

Applicants note that the following amendments to the specification, which were the basis for objections to the specification in the Office Action dated October 21, 2004 (page 3), were previously made in Applicants' Amendment dated August 14, 2003 and were also resubmitted at the Examiner's request on December 18, 2003. However, for the Examiner's convenience, the amendments as previously submitted are reproduced below. Accordingly, the objection to the specification on these bases should be withdrawn.

Please revise the first full paragraph beginning on page 8, line 14, as follows:

The transcriptional cassette will include the in ~~5'-3'~~ 5'-3' direction of transcription, a transcriptional and translational initiation region, a DNA sequence of interest, and a transcriptional and translational termination region functional in plants. The termination region may be native with the transcriptional initiation region, may be native with the DNA sequence of interest, or may be derived from another source. Convenient termination regions are available from the Ti-plasmid of *A. tumefaciens*, such as the octopine synthase and nopaline synthase termination regions. See also, Guerineau et al., (1991) Mol. Gen. Genet. 262:141-144; Proudfoot (1991) Cell 64:671-674; Sanfacon et al. (1991) Genes Dev. 5:141-149; Mogen et al. (1990) Plant Cell 2:1261-1272; Munroe et al. (1990) Gene 91:151-158; Ballas et al. 1989) Nucleic Acids Res. 17:7891-7903; Joshi et al. (1987) Nucleic Acid Res. 15:9627-9639.

Please revise the first full paragraph beginning on page 18, line 4, to read as follows:

(a) Conserved residues (~~highlighted in blue~~ shown in Fig. 1) were defined as those residues occurring in more than 5 of the 7 homologs. These were not targeted for substitution. The exceptions were: at residue numbers 19, 37, 146 and 179 (one of the homologs contained a methionine residue); at positions 67, 80, 130 and 169 (conserved hydrophobic amino acid exchanges observed in at least one sequence) and at position 50 (non-conservative changes from Asn to Ser/Cys in two sequences).

Please revise the first full paragraph beginning on page 21, line 6, as follows:

Fifty *E. coli* colonies containing randomly mutated VSP β genes were picked as small patches to an SB agar plate containing glucose and ampicillin. Patches were allowed to grow overnight at ~~37°C~~ 37°C and were then transferred to a nitrocellulose filter. On the surface of an SB agar plate containing ampicillin and IPTG, this filter was placed on top (cell-side up) of a separate blocked filter to which the antigen (e.g., VSP α) had been coated. During an overnight incubation at ~~30°C~~ 30°C, the cells expressed the VSP β variant they encoded. These proteins were able to diffuse through the top filter and, if correctly folded, bind the antigen-coated filter below. The next day, the antigen-coated filter was washed with PBS-0.05% [tween] Tween™ and incubated with HRP/anti-e tag conjugate. Since the VSP β mutants are cloned into the pCANTAB-5E vector which fuses a C-terminal epitope tag (e-tag) to the VSP β protein variants, bound proteins were detected by this antibody in combination with enhanced chemiluminescence detection.